

Appl. No. 09/241,450
Amdt. dated February 2, 2006
Reply to Office action of December 2, 2005

REMARKS

Reconsideration of this application is respectfully requested. Applicants also request that the Examiner call their attorney, Steven Koffs, at 215-979-1250 if the Examiner feels there is any remaining issue with this application, to expedite the prosecution of this case.

Claims 1-9 and 29-41 were pending. Claims 1-9 and 29-41 were rejected.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-9 and 29-38 were rejected under 35 U.S.C. § 103 as being unpatentable over Green et al. (US 5,397,631) in view of Meier et al. (US 5,169,700). Applicant submits that the rejection is improper and the claims should be allowable in view of the following remarks.

Claim 1 requires:

the body layer comprises insulation having a density of about 0.5 to 7 pounds per foot³, and a thickness of at least about 0.5 inch (1.3 cm); and
(b) a cover layer of a solid of a cured liquid cast on the roughly textured face,
in which the cover layer has a thickness dimension which is substantially uniform and
in which the cover layer is permanently embedded into the body layer from the roughly textured face to a depth less than the thickness dimension.

The claimed product comprises insulation having a density of 0.5 to 7 pounds per foot³, and a thickness of at least about 0.5 inch (1.3 cm).

The Action admits that Green et al. fail to disclose a body layer having the claimed density of 0.5-7 lb/ft³ and thickness of 0.5-6 inches. The Action alleges that it would have been obvious to incorporate an insulation blanket described by Meier et al. into the tile backer of

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Green et al., "motivated by the desire to create an insulation system that has the desired parameters and strength."

The PTO has failed to set forth a motivation or suggestion to combine these references in the manner suggested. "The desire to create an insulation system that has the desired parameters and strength," is nothing more than application of impermissible hindsight based on Applicant's disclosure, because the "desired parameters and strength" are taught by Applicant's disclosure, and not by the prior art of record.

Green is directed to a coated fibrous mat faced gypsum board suitable for use as a tile backer. Green et al. is not directed to insulation. Rather, Green et al. is directed to a tile backer product, and includes only a bare suggestion that, "The coated board can be used also as a component of exterior insulating systems." (col. 11, lines 28-31). [emphasis added]. Steel studs, screws, nails, house wrap, and vapor retarders are also used in insulating systems; however, none of those components are considered insulation.

The PTO must properly evaluate the teachings of the references as they would have been understood by one of ordinary skill in the art at the time the invention was made. The Examiner's attention is directed to the discussion in Green et al. (col. 3, lines 34-46). Green et al. refers to Lehnert Patent 4,647,496. Lehnert 4,647,496 describes a mat faced gypsum board used in exterior insulation systems. The mat facing on the gypsum board is used as a surface for bonding foam insulation board to the gypsum.¹ When Green states that his tile backer board can be used as a component of an insulation system, he is referring to use of the tile backer board in the manner disclosed by Lehnert 4,647,496. The gypsum tile backer board of Green et al. is not an insulation, but instead is the substrate for a separate insulation layer. Green et al. further make clear that their mat is intended to function in the same way as the mat disclosed by Lehnert 4,647,496. See Green et al. col. 6, lines 42-44 of the Green 5397631 patent: "A DURA-GLASS mat which is useful in the structural building applications described in U.S. Pat. No. 4,647,496."

¹ See col. 13, lines 59-62 ("A foamed polystyrene panel 88, about 1 inch thick, is adhered to the fibrous mat-faced board 82 by adhesive 90.")

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The structural application described in Lehnert is the support surface for an insulation panel, as described above.

One of ordinary skill in the art would have understood the characteristics and function of the non-woven mat in Green et al. to be as disclosed fully in Lehnert 4,647,496, which Green et al. references for its teachings on mats. The following passages show that Lehnert teaches that the mat over Green et al.'s gypsum board is not considered an insulation but instead is a substrate for a separate foam insulation layer.

- Lehnert, col. 4, lines 61-64: "[T]he glass fiber mat surface, which is free of set gypsum, provides a excellent substrate to which overlying panels of insulation can be adhered."
- Lehnert, col. 7, lines 56-58: "Presently, the most popularly used insulating material in EISystems is expanded or foamed polystyrene...."
- Lehnert, Claim 1: "An exterior insulation system for a building comprising a glass mat faced gypsum support surface, insulating material having an inner surface and an outer surface, the inner surface of which is adhered to said support surface by an adhesive material...."

The Action argues, "Examiner is equating the fibrous mats of Green et al. to be the same as the newly claimed insulation batting." (page 3). This is essentially claiming that the 1 mm thick nonwoven in Green et al. is considered an insulator equivalent to the 0.5 to 6 inch thick insulation claimed in claim 1. One of ordinary skill in the art would never have considered a 1 mm thick nonwoven to be equivalent to a 0.5" to 6" thick insulation as claimed. In particular, one of ordinary skill familiar with Green et al. would never have considered Green's 1 mm thick nonwoven to be equivalent to a 0.5" to 6" thick insulation in function or characteristics. Green's non-woven mat functions as a support substrate for tiles, or for as a support substrate

The prior art neither disclosed nor suggested replacing the non-woven mat of Green et al. with the insulation blanket of Meier et al., and one of ordinary skill in the art would not have been motivated to do so. The prior art neither disclosed nor suggested replacing the fibrous mat of Green et al. with insulation with a density of about 0.5 to 7 pounds per foot³, and a thickness of at least about 0.5 inch. To do so would mean joining insulation with a density of about 0.5 to 7 pounds per foot³, and a thickness of at least about 0.5 inch directly onto the 0.5 inch gypsum board of Green et al. There was no motivation to modify the prior art as suggested by the

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Examiner. Such a product would not be suitable for use as a tile backer. The mat of Green et al. is used on the interior facing surface of the tile backer to provide water proofing. Performing the substitution urged by the Examiner would place at least 0.5 inch of insulation material of 0.5 to 7 pounds per cubic foot density on the interior facing surface of the gypsum board of the tile backer. Insulation material of at least 0.5 inch in the claimed density range lacks the compressive strength and stability that would be needed to be suitable for use as a tile backer. The application of a small force (e.g., a person leaning against the tile wall) could easily compress the insulation material, damaging the tile wall. No person of ordinary skill would even consider employing such a material as a tile backer.

Therefore, the rejection of claim 1 should be withdrawn. Claim 29 should be patentable for similar reasons.

Regarding claims 39-41, the Examiner alleges that the use of a "a porous web having ... a density of about 1-4 pounds per foot³, and a thickness of about 0.5 to 6 inches" is merely optimization. That is incorrect. The recited ranges make the invention of dependent claims 39-41 a very different type of product that is suitable for different applications than that taught by Green et al. Changing the teachings of a prior art patent so that the prior art is unsatisfactory for its intended purpose and changing the principles of operation of the reference cannot be characterized as "optimization." The same is true for the more dense material of up to 7 pounds per cubic foot now claimed in claims 1 and 29. Thus, the Examiner's allegation that the claimed invention involved only routine skill in the art also fails.

Therefore, claims 39-41 should be allowed.

Claims 2-9, 29-39, and 41 variously depend from claim 1 or claim 29, and should all be allowable for at least the same reasons as the independent claims.

In claim 3, "fiberglass" is changed to "fiber glass", because the one-word version of the term is considered a trademark. This change of terminology is not related to any issue of patentability. Also, in claims 3 and 30, the alternative of mineral fibers is added. Support for this amendment is provided at page 8, line 13. No new matter is added.

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In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is now in condition for allowance, and request early notification to that effect.

Respectfully submitted,



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